A NEW SPECIES OF *OCYBADISTES* HERON (LEPIDOPTERA: HESPERIIDAE) FROM AUSTRALIA

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Abstract

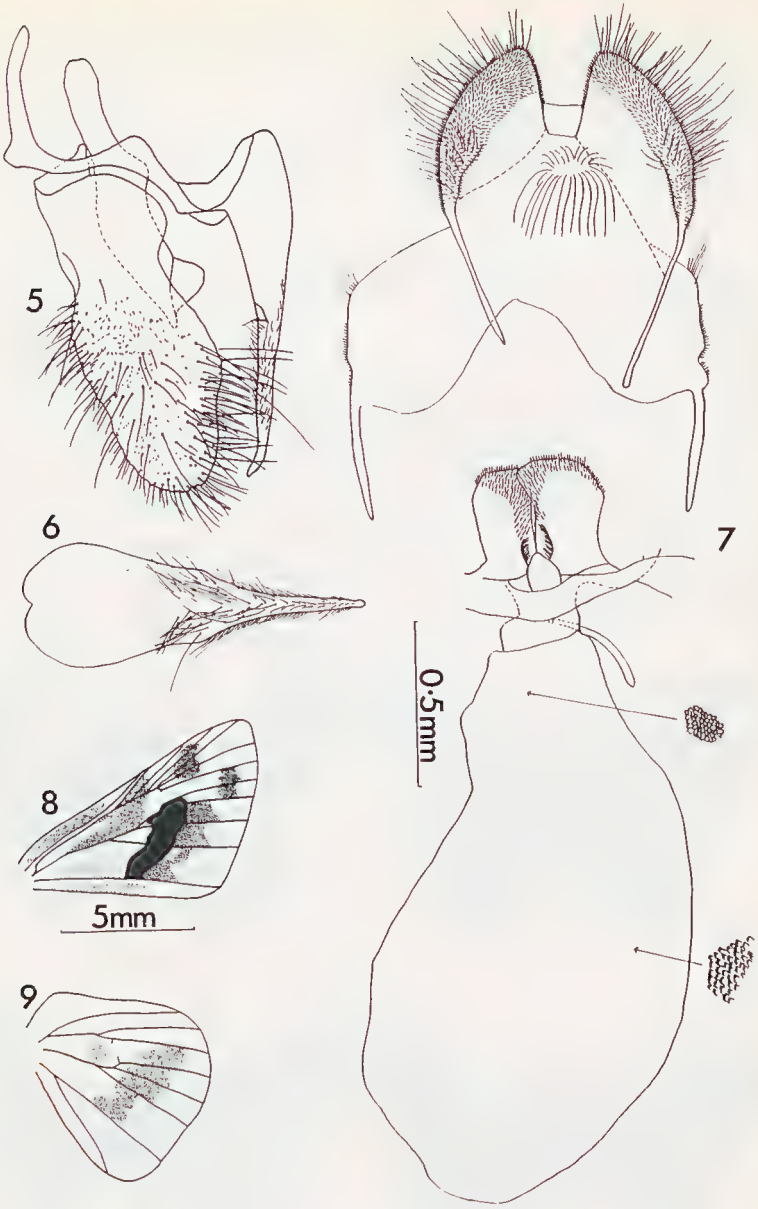
Ocybadistes knightorum sp.n. from coastal New South Wales is described and figured, and the male genitalia compared with those of other Australian *Ocybadistes* spp. We propose the common name, Knight's dart.

Introduction

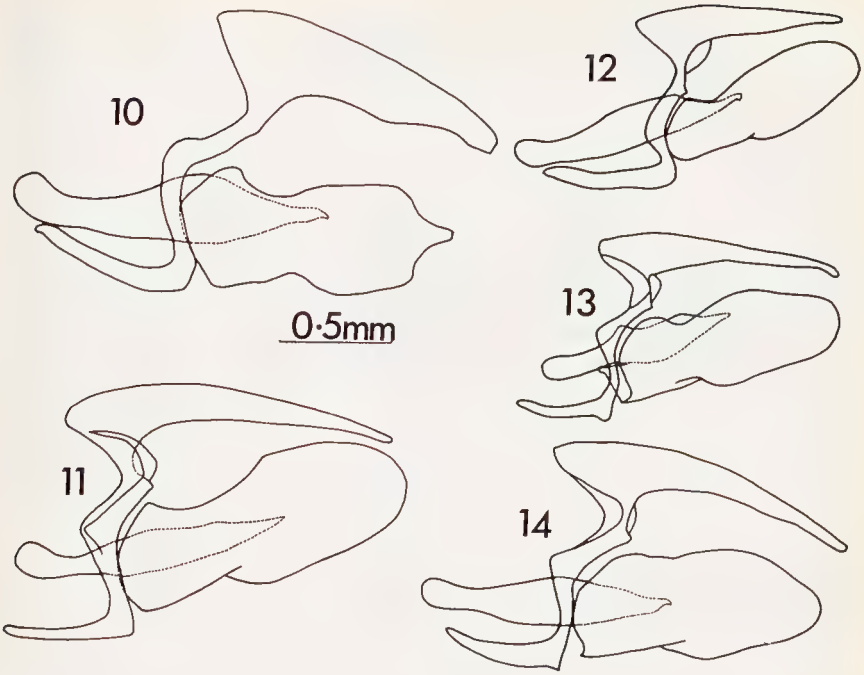
The Hesperiinae contain three genera (*Taractrocera* Butler, *Ocybadistes* Heron and *Suniana* Evans) commonly called grassdarts, all species of which closely resemble each other in size and colour. Species identification can be difficult, particularly for females, but males can be identified by the shape and position, or absence, of a sex-brand on the forewing. All species of *Ocybadistes* have sex-brands in the males (Evans 1949).

Four of the five previously known species of *Ocybadistes* are recorded from Australia and *O. hypomeloma* Lower is endemic (Common and Waterhouse 1981). The extralimital species, *O. papua* Evans is restricted to New

Figs. 1-4. *O. knightorum* (1-2) ♂: (1) upperside; (2) underside; (3-4) ♀: (3) upperside; (4) underside. Scale bar = 5 mm.



Figs 5-9. *O. knightorum* (5-6) ♂ genitalia: (5) lateral view; (6) uncus, dorsal view; (7) ♀ genitalia (extended) dorsal view; (8) ♂ fore wing, upperside; (9) ♂ hindwing, upperside. Scale bar = 0.5mm (Figs 5-7); 5mm (Figs 8-9).



Figs 10-14. *Ocybadistes* spp., ♂ genitalia, lateral view (10) *O. hypomeloma*; (11) *O. walkeri*; (12) *O. ardea*; (13) *O. knightorum*; (14) *O. flavovittatus*. Scale bar = 0.5mm.

Guinea. Specimens of a new species of *Ocybadistes* have been collected in the Boambee Creek area, south of Coffs Harbour, New South Wales, from September to November 1992. These resemble *O. walkeri* Heron in size and colour, but are much darker, have a larger sex-brand and have different genitalia.

Abbreviations

Abbreviations of collections where specimens are housed, are as follows:

AIK, A.I. Knight Collection, Brisbane; JFD, J.F. Donaldson Collection, Thornlands; MDB, M. De Baar Collection, Brisbane; QDPI, Qld Department of Primary Industries, Brisbane; QM, Qld Museum, Brisbane; TAL, T.A. Lambkin Collection, Brisbane.

Ocybadistes knightorum sp.n. Knight's dart (Figs 1-9)

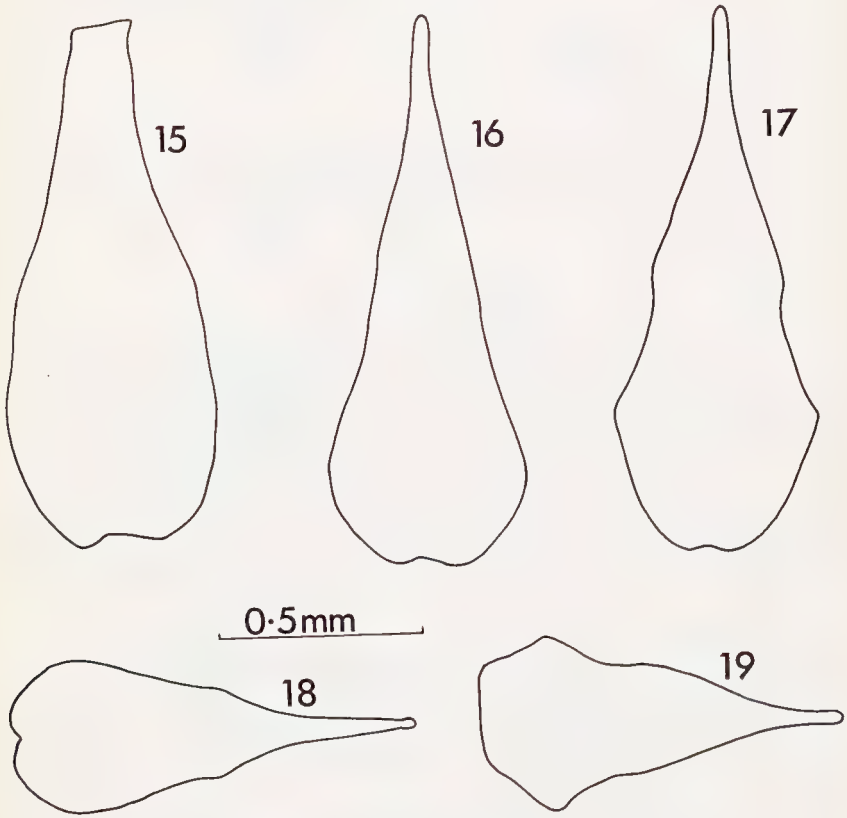
Types. NEW SOUTH WALES: Holotype ♂, Boambee Ck. S. of Coffs Harbour, NSW, 25-26.ix.92, A.I. and C.T. Knight, Reg. no. 12994 in QM. Paratypes, 1 ♀, same data as holotype except 12-15.xi.92, (QDPI); 18 ♂♂,

same data as holotype except collected A.I. Knight (4 ♂♂ AIK; 5 ♂♂ TAL; 9 ♂♂ JFD); 6 ♂♂, same data except 11-12.ix.92 (2 ♂♂ AIK; 4 ♂♂ TAL); 11 ♂♂, 19 ♀♀ same data except 12-15.xi.92 (2 ♂♂, 6 ♀♀AIK; 3 ♂♂, 11 ♀♀ TAL; 6 ♂♂, 2 ♀♀ JFD); 30 ♂♂, 4 ♀♀, same data except 15.x.92, M. De Baar (29 ♂♂, 3 ♀♀ MDB; 1 ♂, 1 ♀ TAL).

Description

Male (Figs 1-2, 5-6, 8-9)

Head black, covered with short golden hairs; eyes smooth and black; labial palpi densely covered with long hairs, mostly golden but some black; proboscis naked, dark brown. Antennae: scape with tuft of long black hairs laterally; flagellum gradually dilated apically to form club, with hooked tip;



Figs 15-19. *Ocybadistes* spp., ♂ uncus, dorsal view (15) *O. hypomeloma*; (16) *O. walkeri*; (17) *O. flavovittatus*; (18) *O. knightorum*: (19) *O. ardea*. Scale bar = 0.5mm.

club black with dorsal surface orange; each unit of flagellum with narrow orange basal band. Thorax and abdomen with long golden hairs, dorsally sparse, ventrally dense. Forewing above (Fig. 8): length 8.9-10.0 mm; venation as illustrated; ground colour black, discal cell with central orange patch extending into basal spaces bordered by R_1 and R_3; area anterior to subcosta orange in basal two-thirds; irregular subapical orange patch between R_3 and M_1; subterminal orange band between M_1 and M_3; narrow irregular postmedian orange band from M_3 to 1A+2A touching outside edge of sex-brand for almost its whole length; 2 pale orange streaks above anal vein and inner margin; long fringing scales black except for yellow tornus; sex-brand black, oblique, from vein M_2 to anal vein, broad throughout but tapering slightly at base. Hindwing above (Fig. 9): small spot in cell with narrow irregular postmedian band from M_1 to 1A+2A; long fringing scales yellow. Forewing below: ground colour black but overlaid with orange scales in subapical areas and extending down terminal area to CuA_2; markings as above but lacking inner marginal streaks. Hindwing below: ground colour black with overlying orange scales (much less so in area posterior to vein 1A+2A).

Genitalia (Figs 5-6): saccus in lateral view long and narrow; uncus in lateral and dorsal views evenly tapering to acute hairy apex, latter bent ventrally; valva in lateral view long with broadly rounded hairy apex; aedeagus in lateral view with 2 slightly convex dorsal areas, ventral margin slightly concave, apex pointed and not bent ventrally.

Female (Figs 3-4, 7)

As in male but forewing with termen more convex, length 8.7-10.0 mm; above without sex-brand and markings slightly more yellow; below as in male, but overlaying scales lemon-yellow and also covering area posterior to vein 1A+2A.

Genitalia (Fig. 7): corpus bursae simple, elongate, covered with strong sculpturing, without signum; ductus bursae very short and broad; anterior and posterior apophyses present, long and narrow; papillae anales hairy.

Variation

In some specimens of both sexes, the orange bands can be slightly narrower giving the specimen a slightly darker appearance. Apart from this, all the known specimens are almost uniform in size, colour and markings. Worn specimens which have lost their overlaying scales beneath their wings have a much darker appearance.

Distribution

This species is known only from a small area near Boambee Creek, south of Coffs Harbour, New South Wales (30°22'S, 153°04'E).

Etymology

The specific and common names honour A.I. (Ian) and C.T. (Cindy) Knight who first discovered and collected this species.

Discussion

Ocybadistes and *Taractrocera* can be distinguished by the antennal club, which has a short, slightly bent apiculus in *Ocybadistes* and a flattened, spoon-shape in *Taractrocera* (Common and Waterhouse 1981). The presence of a long narrow, undivided uncus in the male genitalia (Fig. 6) (Common and Waterhouse 1981) separates *Ocybadistes* from *Suniana*. The black ground colour, narrow orange markings and broad black sex-brand distinguish *O. knightorum* from other *Ocybadistes* spp. It appears to be extremely local in distribution, unlike its wide ranging congeners. Even within the small collection site, the species appears to be local (A.I. Knight *pers. comm.*)

The ♂ genitalia of *O. hypomeloma* are quite different from that of other Australian *Ocybadistes* spp. In *O. hypomeloma* the uncus (Fig. 10) has a truncated apex and the valva is medially pointed. In the other species, the apex of the uncus is acute and the valva is broadly rounded. *O. knightorum* can be readily distinguished from these species by having the apex of the uncus bent ventrally (Fig. 13).

The type locality near Boambee Creek consists of swampy, sparse eucalypt woodland mixed with *Melaleuca* with an understorey of *Gahnia* and mixed grass species. Adult males have been observed to fly fast and low, often settling on densely packed clumps of low vegetation, while females fly more slowly, closer to the ground visiting and circling patches of grass (A.I. Knight *pers. comm.*). *O. knightorum* shares this habitat with *O. walkeri sothis* Waterhouse, *O. flavovittatus flavovittatus* (Latreille), *Suniana lascivia lascivia* (Rosenstock) and *S. sunias nola* (Waterhouse) and can be distinguished in flight by its much darker appearance. The increasingly uncommon satyrid, *Tisiphone abeona morrisi* Waterhouse (Nymphalidae) also occurs commonly in this same small area. Nothing is known about the early stages or the host of *O. knightorum*.

Acknowledgments

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References

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